

Teacher knowledge for technical education in Brazil: meanings in dispute

Saberes docentes para a educação profissional e tecnológica: sentidos em disputa

Saberes pedagógicos para la enseñanza técnica en Brasil: significados en disputa

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ABSTRACT

This article is part of the theoretical-practical discussions about the training and knowledge of teachers and aims to analyze the epistemological meaning attributed to teaching knowledge in the research of renowned authors in the area, in order to understand whether they establish relations with a socially referenced professional and technological education project. To do this, the authors' texts were searched to identify the epistemological meaning attributed to teaching knowledge. The research is bibliographical, using historical-dialectical materialism as its method. The results show that the studies analyzed are linked to a practical-utilitarian perspective of teacher training and knowledge, centered on what is done in the classroom and detached from the social, political and economic reality. On the contrary, it is argued that teacher training and knowledge should be linked to praxis and strictly connected to social, political, economic and pedagogical reality.

Keywords: Teacher Training. Teaching Knowledge. Professional and Technological Education.

RESUMO

O presente artigo insere-se nas discussões teórico-práticas acerca da formação e saberes dos/as professores/as e tem como objetivo analisar o sentido epistemológico atribuído aos saberes docentes nas pesquisas de autores consagrados da área, a fim de compreender se estabelecem relações com um projeto de educação profissional e tecnológica socialmente referenciado. Para isso, realizaram-se buscas nos textos dos autores para identificar o sentido epistemológico atribuído aos saberes docentes. A pesquisa se configura como bibliográfica, tendo como método o materialismo histórico-dialético. Os resultados mostram que há vinculação dos estudos a uma perspectiva prática-utilitária de saberes docentes centrados no fazer em sala de aula, contudo dissociados da realidade social, política e econômica. De forma contrária, defende-se que a formação e os saberes docentes estejam vinculados à práxis e estritamente vinculados à realidade social, política, econômica, pedagógica e didática.

Palavras-chave: Formação Docente. Saberes Docentes. Educação Profissional e Tecnológica.

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RESUMEN

Este artículo se enmarca en las discusiones teórico-prácticas sobre la formación y el conocimiento de los docentes y tiene como objetivo analizar el significado epistemológico atribuido al conocimiento docente en las investigaciones de autores reconocidos en el área, con el fin de comprender si establecen relaciones con un contexto socialmente referenciado. Proyecto de Educación Profesional y Tecnológica. Para ello, se buscaron los textos de los autores para identificar el significado epistemológico atribuido al saber docente. La investigación es bibliográfica, utilizando como método el materialismo histórico-dialéctico. Los resultados muestran que los estudios analizados están vinculados a una perspectiva de la formación y del conocimiento docente, centrada en lo que se hace en el aula y desvinculada de la realidad social, política y económica. Por otro lado, se argumenta que la formación y el conocimiento del profesorado están vinculados a la praxis y estrictamente conectados con la realidad social, política y económica.

Palabras clave: Formación del Profesorado. Conocimiento Docente. Educación Profesional y Tecnológica.

INTRODUCTION

In the 1980s and 1990s, educational research published in advanced capitalist countries such as the United States and Canada highlighted the need to systematize a knowledge base to characterize the teaching work. It was inferred at that time that, like doctors, lawyers, engineers, and architects, teachers also possess a specific type of knowledge that characterizes their work.

According to this logic, the construction, mobilization, and social valorization of teaching knowledge could lead to a certain status for the career in question (Tardif, 2014). The main researchers in this school of thought on teacher training and work are Maurice Tardif, Clermont Gauthier, and Lee Shulman.

In Brazil, the discussion surrounding teaching knowledge began to spread with the publication, in 1991, of the first article by Tardif *et al.* (1991) in the journal *Teoria & Educação*. In this regard, Almeida and Biajone (2007, p. 284) state that “it is important to clarify that, in Brazil, this topic was introduced mainly through the works of Tardif and, later, Gauthier and Shulman.” These studies gradually received attention from institutions and departments focused on initial and continuing teacher training, serving as a theoretical reference for the curricular components of the pedagogical axis of Brazilian teacher training.

Parallel to the dissemination of foreign researchers’ studies in teacher training courses in Brazil, we must highlight that there has also been an increase in the use of the term “teaching knowledge” in official documents in our country during the 2000s and 2010s, without much discussion about its meaning, as highlighted by Magalhães (2016) in his master’s research.

In the case of teacher training for professional and technological education (PTE), research by Araujo (2008), Machado (2008; 2019), Moura (2014), Moraes *et al.* (2019), and Moraes and Henrique (2020) highlight the need to problematize teacher training based on the reality of the Brazilian educational system, without disconnecting it from the social, political, economic, and cultural conditions of Brazil.

In this case, there is an important point to consider in the study of teaching knowledge in the field of professional education (PE). Brazilian researchers in this field highlight the need to problematize teacher training based on material reality, and social, political, economic, and pedagogical constraints. Meanwhile, the main studies on teaching knowledge are by researchers

from countries such as the United States and Canada, whose social, political, economic, and educational realities diverge from ours.

Considering this dimension a starting point, we ask ourselves how we can discuss teaching knowledge based primarily on researchers who conduct their research in countries with advanced capitalism and far removed from the Brazilian reality? How can these researches be “applied” in Brazil, disregarding the social, political, economic, and educational reality of our country? What are the epistemological foundations that guide hegemonic studies in educational literature on teaching knowledge? Does this discussion establish relationships with teacher training committed to another form of sociability, or does it reinforce the logic of capital?

Thus, it is necessary to question the epistemological meaning attributed to teaching knowledge by Gauthier *et al.* (2014), Shulman (2014) and Tardif (2014), with that, to understand whether it is possible to make an association between the teaching knowledge raised by the researchers and the training project defended by the main researchers in the area of teacher training for PE in Brazil (Araujo, 2008; Machado, 2008; Moura, 2014).

The subject of this study was developed while we were conducting doctoral research in the Graduate Program in Professional Education (PPGEP) at the Federal Institute of Education, Science, and Technology of Rio Grande do Norte (IFRN), defended in mid-2022. Based on our readings, we observed a predominance of discussions around knowledge linked to practice and reflection on it, which caught our attention and sparked our interest in furthering the discussion.

Thus, this article questions the epistemological meaning attributed to teaching knowledge in hegemonic studies in the field of education, teacher education, and teacher training for PTE in Brazil. More specifically, the objective of this article is to analyze the epistemological meaning attributed to teaching knowledge in the studies by Gauthier *et al.* (2014), Shulman (2014), and Tardif (2014) in order to understand whether they establish relationships with a concept of teacher training that is consistent with a socially referenced project of human training and PE.

This article is a bibliographic study, in which surveys were conducted of the main researchers who discuss teaching knowledge. We have analyzed renowned authors on the subject, such as Gauthier *et al.* (2014), Shulman (2014), and Tardif (2014). In parallel, we consulted studies by Frigotto (1985), Kuenzer (1997), Ciavatta (1998; 2000), Ramos (2011), and Moura (2014), as they discuss a socially referenced PE project.

In addition to the introduction, the article presents a summary of teaching knowledge from a practical perspective. Subsequently, we discuss teacher training and knowledge based on praxis and, finally, we present our concluding remarks.

TEACHING KNOWLEDGE FROM A PRACTICAL PERSPECTIVE

The main study on teaching knowledge in Brazil is the book entitled *Saberes Docentes e Formação Profissional* [Teaching Knowledge and Professional Training], first published in 2002 and authored by Maurice Tardif. In the researcher’s view, teachers’ knowledge is related “to their person and their identity, their life experience and professional history, their relationships with students in the classroom, and with other school actors in the school” (Tardif, 2014, p. 55).

The issue of time is fundamental for Tardif (2014, p. 57) in the constitution of teaching knowledge, because this condition appears “as an important factor in understanding workers’ knowledge, since working refers to learning to work, that is, progressively mastering the knowledge necessary to perform the work.” In another excerpt from the book, the author asserts that “teachers’ knowledge is temporal, which means, initially, that teaching presupposes learning to teach, that is, learning to progressively master the knowledge necessary to perform teaching work” (Tardif, 2014, p. 20).

Still according to this author, teachers build knowledge as they work. For him, “teachers’ knowledge must be understood in close relation to their work at school and in the classroom” (Tardif, 2014, p. 16). From this perspective, the work is linked to the performance of teachers in practical teaching and learning contexts.

According to Tardif (2014), teaching knowledge is built on the basis of teachers’ life stories and experiences and they are at the service of their work, which in this case is linked to practice. In the researcher’s understanding, teachers have various conceptions of practice, all of which are based not only on their daily and biographical reality, but also on the needs, resources, and limitations of everyday life. There is not just one practice, but several, which are diverse and plural. Such knowledge is social, since teachers work “with individuals and according to a project: to transform students, educate them, and instruct them” (Tardif, 2014, p. 13).

The systematization advocated by Tardif (2014) is based on the practice, experience, and daily life of teachers, and it is validated by these elements. Only disciplinary and professional knowledge are built during initial training; however, the former is independent of the latter, and it can even be built in different spaces. This argument contributes to the distancing of the articulation/integration of specific training (to work in a curricular component) from pedagogical training (which encompasses knowledge of the science of education).

In addition to the strong influence of Maurice Tardif’s studies on teaching knowledge in Brazil, the research of Gauthier *et al.* (2014) also stand out, as they seek to problematize the knowledge necessary for teaching. For them, “knowledge of these elements of professional teaching [...] is fundamental and it can enable teachers to perform their duties with much greater competence” (Gauthier *et al.*, 2014, p. 17).

Like Tardif (2014), Gauthier *et al.* (2014) also defend disciplinary and curricular knowledge. These approaches are similar in this respect. However, when it comes to pedagogical, experiential, and pedagogical action knowledge, the researchers diverge. In the approach of Clermont Gauthier *et al.* (2014), experiential knowledge is unique and individual, being validated and transformed into other types of knowledge, namely pedagogical action knowledge.

The emphasis of the work by Gauthier *et al.* (2014) is precisely on the transformation of experiential knowledge (individual) into pedagogical knowledge (collective and shared). This process is mediated by research, but the authors do not associate it with the epistemic thinking of the science of education (other types of knowledge listed by the researchers). In this approach, the teacher acquires experiential knowledge through pedagogical action but share it with other teachers and professionals at the school.

In this defense, we can observe, as in Tardif’s study (2014), that there is a pole of knowledge with a theoretical perspective and another that is more practical. When discussing traditional pedagogical knowledge, i.e., knowledge linked to common sense about education and teaching-learning processes, Gauthier *et al.* (2014, p. 18) comment that “this traditional knowledge has many weaknesses, as it can contain numerous errors. It will be adapted and modified by experiential knowledge and, above all, validated or not by pedagogical action knowledge.”

Another major contributor to the discussions surrounding teaching knowledge worldwide in the 1980s was Lee Shulman. He was a philosopher and doctor of psychology from the University of Chicago, the city where he was born. Shulman (2014) argues that there is a category of knowledge that distinguishes teachers from other professions. This issue is highlighted in the book *Knowledge and teaching: foundations of the new reform* (Shulman, 1987), written in English in 1987, which presents to the academic community the constructs that influenced a generation of researchers: sources of knowledge base for teaching, and model of action and pedagogical reasoning.

The issues of time and pedagogical action are diluted in Lee Shulman's approach. For this researcher, the sources of knowledge acquisition for secondary school teachers are academic, from curricular organization and from educational processes, from theoretical research, and from wisdom gained from practice itself.

Unlike Gauthier *et al.* (2014), Shulman (2014) and Tardif (2014) focuses his study on teachers' cognitive knowledge of the subject/discipline they teach. Contrary to disciplinary knowledge, Lee Shulman (2014) argues that the knowledge constructed by teachers should be at the service of teaching content. The centrality of the proposal to content and disciplines can also be observed in the issue of pedagogical and curricular knowledge, considering that these must be towards teaching content.

With regard to the role of practice, Shulman (2014, p. 211) believes that it is "the ultimate source of knowledge and the least studied and codified of all." It is wisdom acquired through practice itself, the maxims that guide (or provide reflective rationalization for) the practices of competent teachers. In this sense, in the author's understanding, practice should be studied more, as it constitutes the most important knowledge for teachers working in elementary schools.

Following this movement of foreign researchers who have strongly influenced Brazilian studies over the last thirty years, we draw attention to the fact that, despite the differences, the studies converge towards a practice-centered epistemology, linked to the logic of capital and advanced capitalist countries, given that none of them presents an ethical-political commitment to transforming individual and collective realities.

This issue is very evident insofar as the studies of the three researchers listed focus on the acquisition of teaching knowledge in practical, utilitarian activities centered solely and exclusively on the classroom. It is understood that teachers are social subjects and that their daily work is situated within the fabric of contradictions inherent in the capitalist society in which all people are embedded.

In addition, teachers are individuals who should receive initial and continuing theoretical and practical training that provides support not only for teaching in the classroom, but also for other areas where teachers may work, such as trade unions, education councils, and collegiate bodies of educational institutions that have democratic management, as determined by the 1988 Brazilian Constitution and Law No. 9,394/1996, or the Guidelines and Bases for National Education (LDBEN). For this, also necessary is the development of critical-contextual knowledge (Saviani, 1996), derived from socio-historical concepts that enable teachers not only to play active and innovative roles in society, but also to train their students to work in public institutions with democratic management.

In the studies by Gauthier *et al.* (2014), Shulman (2014) and Tardif (2014), there is a relativization or even downgrading of the role of initial and continuing teacher training in the constitution of teaching knowledge. Furthermore, practice is contrasted with theory and, in a dichotomous manner, assumes centrality, leading teachers to act uncritically in the classroom by performing mechanical actions that reproduce teaching methods and techniques. This perspective on the theory-practice relationship is hegemonic in studies on teacher training, underpinning the category of experiential knowledge or practical knowledge.

Barbosa Neto and Costa (2016) survey authors in the field of teacher training who discuss knowledge in teacher training. According to the authors, in categorizing knowledge,

the greatest emphasis is placed on experiential knowledge, which ranks second in terms of both the number of works cited and the number of citations found. [...] This significance can be amplified when one realizes [...] that experiential knowledge or

knowledge from experience is used and observed by all authors presented in the table¹ (Barbosa Neto and Costa, 2016, p. 90).

The relationship between theory and practice, the downgrading of the social function of teacher training in institutionalized spaces, and the lack of a teleological perspective on the transformation of the capitalist mode of production are elements that demonstrate the researchers' attachment surveyed to a conservative approach to teaching knowledge.

In search of another concept for teacher training, in the next item, we will present teaching knowledge from the perspective of praxis, in which the relationship between theory and practice is understood as indissoluble, maintaining mutual interdependence despite their autonomous existence. This perspective favors the constitution of critical-reflective pedagogical practices of a progressive nature, since the orientation of teaching action draws on the theories studied and, in a dialectical way, is confronted with reality, problematized, and reinvigorated. Thus, there is a feedback between theory and practice, without a hierarchy.

TEACHING KNOWLEDGE FOR A SOCIALLY REFERENCED PROFESSIONAL AND TECHNOLOGICAL EDUCATION PROJECT

In the previous section, we presented the main elements of studies by foreign researchers who discuss teacher training and knowledge from a practical perspective. We found that their approaches are centered on practice, given that Gauthier *et al.* (2014), Shulman (2014) and Maurice Tardif (2014) generally argue that teachers should develop their daily work based on reflection grounded in classroom practice.

Due to this specific focus on practical issues within the restricted context of teaching, there is a silence regarding the linking of knowledge to a society project that differs from the current hegemonic one. Furthermore, teaching knowledge from a practical perspective relativizes the role of theory and centers teacher training on the life history and daily routine of teachers themselves.

By failing to highlight the teaching knowledge proposed in their scientific productions, researchers open up the possibility for questioning regarding the affiliations of this knowledge in the competing projects of society, human formation, and education. For this reason, it is important to delimit the two projects of society that are in contention in reality, so that it is possible to reflect on the knowledge of educators.

The hegemonic economic, cultural, legal, educational, pedagogical, and media project in society is capitalism (Harvey, 2014). This project gained strength as the material structure of human existence after the Industrial Revolution in the 18th century. Despite changes in the regimes of capital accumulation over the centuries, the owners of the means of production are still capitalist people, leaving workers to sell their labor force to the system in order to draw their livelihood.

Added to this is the fact that capitalist society is conservative, as it is not in the interests of capital owners to promote a new form of human sociability. In this sense, education, within the context of capitalist society, is also situated within social class strife, corresponding to the capital determinations. The classroom, as a constituent space of educational institutions, is neither neutral nor detached from the interests of capital.

Teachers, as workers, can contribute to training individuals to maintain the capitalist mode of production or offer critical, transformative, and emancipatory education. The interest

1 The authors found that Tardif, Gauthier, Shulman, Pimenta, Saviani, Nóvoa, and Altet are the most frequently cited researchers in studies on categories of teaching knowledge.

of the capital in training workers with the minimum skills required to take on jobs outweighs workers' desire for a humanistic education that integrates science, technology, culture, sports, and leisure.

In this logic of maintaining the capitalist mode of production, teachers are expected to receive practical and utilitarian training to serve the immediate needs of the labor market. Among the skills required by capital, the mastery of emotions by students and teachers stands out, so that it can be applied in different situations inherent to the work context. In addition, flexible, practical, and utilitarian professionals are required to respond to changes in the capitalist mode of production and its respective accumulation regimes.

Educational institutions are called upon to meet the needs of the market and its representatives. For this reason, teachers' work — and their training — is expected to respond to market interests. Therefore, teachers must also be practical, with a practice centered on their everyday actions at school, disconnected from the relationships between society and the school, and work and education. The more practical teachers are, the more likely it is that the logic of capital will enter educational institutions, as teaching work will correspond to the immediate interests of capital.

As discussed in the previous section, the teaching knowledge advocated by Gauthier *et al.* (2014), Shulman (2014) and Tardif (2014) fits within the perspective of defending practical, utilitarian, and classroom-centered knowledge. The specific content knowledge of the curriculum component to be taught by teachers in the classroom is always advocated, but when it comes to pedagogical knowledge or the science of education, there is a defense around the practice and applicability of pedagogical and didactic knowledge in the classroom. In addition, researchers draw attention to experiential knowledge, in which teachers use the meanings and learning developed throughout their careers to implement teaching-learning processes.

When discussing market logic in teacher training and daily practice, Diniz-Pereira and Soares (2019) highlight that, in recent decades, international development institutions such as the World Bank have been primarily responsible for organizing technical and instrumental reforms and programs for teacher training, especially in developing countries such as Brazil. These entities seek to align school education and teacher training with market demands and, consequently, with the needs of capitalism.

Unlike the practical-utilitarian profile, we advocate a training proposal that includes discussions involving the organization of society, as well as an understanding of the disputes between capitalists and the working class and the role of school education as an instrument for transforming individual and collective realities, which also implies society itself. Furthermore, we believe that theory and practice should not be hierarchized or separated (either dissociatively or associatively) in teacher training. In other words, there should not be a theoretical moment and a practical one in training and practice.

The integration of theory and practice is postulated, in a relationship that must be understood as a totality, in a simultaneous and reciprocal relationship of autonomy and dependence, whose meaning is reflection-action-transformation. Thus, they form a unity with a view to praxis. From this perspective, the relationship between theory and practice is inseparable, but each retains its particularity (Montenegro *et al.*, 2006). In other words, unlike the dichotomous understanding, from an integrative perspective,

Theory no longer commands practice, no longer guides it in the sense of making it dependent on ideas, nor does it dissolve into practice, nullifying itself. Practice, for its part, no longer means the application of theory or a given or immutable activity (Candau and Lelis, 2001, p. 63).

Montenegro *et al.* (2006) point out that, underlying this perspective on the relationship between theory and practice, are four premises: theory depends on practice; theory has practice as its purpose; the primacy of practice implies practice in terms of knowledge of the reality it transforms and the demands it seeks to respond to; and, finally, practice asserts itself as both a subjective (consciousness) and objective (material and proven) activity.

In addition to the theory-practice relationship, we believe that the work of teachers aimed at comprehensive human development requires a critical, emancipatory, and transformative teacher training process. Discussions about the organization of society, modes of subsistence production, social inequalities, and diversity issues are essential and should be incorporated not only in the initial training of teacher graduates, but also in the institutionalized continuing education of teachers working in both the preparatory and technical areas.

Thus, we agree with Silva, Henrique and Oliveira Neta (2019, p. 13) when they state that:

It is necessary for the teacher to be able to bring a critical direction to their work, based on collective and interdisciplinary work, theoretical-practical appropriation, and ethical-political commitment, assuming teaching as a profession, fighting for spaces of appreciation and rejecting the precariousness of teacher training and work, and consequently, be able to promote an emancipatory education among their students from the perspective of human formation.

In this regard, this article highlights the work carried out by Orso (2011) and Curado-Silva (2017), given that they denounce the weaknesses of teacher training linked to capital, as well as clearly basing themselves on Marxian and Marxist authors to discuss teacher training, which enables the resumption of the question of praxis with a view to transforming the current reality.

In summary, praxis radically opposes the capitalist mode of production and its ramifications, since Marxian revolutionary theory seeks, in its foundations, to overcome this model. The praxis perspective is the only one that explicitly defends the teleological sense of transforming current society and the social inequalities resulting from the prevailing mode of production, and this makes it different from the approach to teacher training and knowledge linked to the logic of capital, which is based on a pragmatic perspective.

In the project of training and teaching knowledge linked to praxis, in addition to the teleological sense of transformation, practice and theory are seen as inseparable, and it is not possible to hierarchize them, much less separate them into distinct poles. According to Vázquez (2011, p. 111), praxis is “practical, insofar as theory, as a guide for action, shapes human activity, particularly revolutionary activity; theoretical, insofar as this relationship is conscious.” Therefore, practice is both subjective and objective activity.

In view of this, people are both theoretical and practical subjects at the same time, since, volitionally, they seek to modify and transform a given reality. If this reality must be changed, philosophy cannot be a theoretical instrument for conserving or justifying reality, but rather for transforming it, hence the revolutionary character of philosophy and the epistemology of praxis.

In this case, theory should be the “guide for action” for teachers, as well as their knowledge in the real contexts that involve the teaching profession as a whole, which also encompasses the teaching-learning processes. This theory, and consequently practice, must aim to transform capitalist society, which requires teaching professionals to be aware of their role both in this society and in the future. It should be noted that this critical view is acquired as teachers receive training and real conditions for this, so training plays a fundamental role in the constitution of teaching knowledge.

With regard to training and teaching knowledge from a practical perspective, Curado-Silva (2017, p. 130) argues that

what is defended, from this perspective, is the concept that teacher training aspires to educate historical subjects based on an indissoluble relationship between theory and practice, science and technique, constituted in the workplace, and which guarantees these subjects an understanding of socioeconomic and political realities, enabling them to guide and transform the conditions imposed on them.

Teacher training must not lose sight of the fact that school education contributes to the formation of historical and real subjects, which includes the teachers themselves. We are real beings, who have arrived here through the history of men and women who are also real. Work has been and still is a determining factor in the production of history, given that science and technology are consequences of the material force that men and women exert on nature based on objective (concrete reality) and subjective (themselves and their consciousness) transformation.

According to Curado-Silva (2017), it is by becoming aware of the relationship between work, science, and technology, from a historical perspective, that teachers can understand the internal contradictions of social inequalities in the capitalist mode of production and, thus, align their actions with the ethical-political perspective of transforming the conditions imposed on them.

Currently, there are countless conditions imposed on teachers' work in capitalist society, but we warn against the perspective of business management models that are gaining ground in public and private schools, whether they are PTE or not (Moraes and Henrique, 2020).

On the contrary, the objective of teacher training, from a practical perspective, is to enable teachers to carry out pedagogical mediation, which requires them to have a wide range of knowledge, namely: the history and social and political purposes of school education; school content; psychological and learning processes and conscious teaching methods and techniques (Curado-Silva, 2017), and the relationships between work, society, and education, in their interface with the world of work, culture, and science. These characteristics are far away from the profile of the practical-utilitarian teacher, since decision-making takes place consciously and with a view to the education project linked to the working class.

In the words of Orso (2011), it consists of

organizing knowledge and training educators in such a way as to enable them to master and appropriate history, man, and society, to enable them to understand education itself and its history, to enable them to recover the past, understand the present, overcome antagonistic contradictions, and transform the future (Orso, 2011, p. 70).

In the case of PTE this is even more evident, given that, in this form of school education, teachers mobilize their knowledge with a view to training workers and their children for the world of work. In Brazil, millions of young people and adults are receiving training in PTE, a form of education that, from the perspective of socially referenced education, has work, science, technology, and culture as its working axis.

By advocating for critical, transformative, emancipatory, and working-class-centered teacher training, we believe that there is no room for neoliberals² to appropriate theoretical fragments to

2 Neoliberalism is based on the idea of reviving and renewing liberalism, the free market, and defeating socialism. Based on these assumptions, it opposes both state intervention in the economy and the adoption of broad social policies, such as those implemented by the welfare state. In practice, neoliberalism consolidated itself in the context of global economic transformations during the late 1970s and 1980s, periods marked by an acute economic crisis in the advanced capitalist world and the crisis of real socialism (in Germany and the Soviet Union). The collapse of socialist economies, which developed under strong state intervention, and the crisis of the economies of social democratic countries, which in the post-World War II period advocated greater state control over the market, contributed significantly to the strengthening of theories that sanctify the market as the regulator of economic and social relations. This dynamic forms the intellectual basis of liberalism, providing an ideological justification for the market as a valuable form of social order (Cabral Neto, 2012).

implement their project of education for capital development. From the moment we recover the meaning of praxis, we highlight delimited (never limited or closed) conceptions of man, society, nature, science, technology, and culture that explicitly oppose the interests of the owners of the means of production of human existence.

Thus, we believe that hegemony surrounding teaching knowledge from a practical perspective is not sufficient to implement teaching-learning processes from a critical-emancipatory perspective. We believe that education and PTE are important tools in the broader context of the struggle to transform hegemonic capitalist society, and that teacher training and knowledge are part of this process.

Thus, teacher training cannot separate theory from practice, or practice from theory, nor can it be structured around life history and reflection on practice, as it will not be possible for teachers to understand the basic categories that underpin the capitalist mode of production. When trained in these constraints, it is difficult for teachers to understand the basic dimensions of socially referenced PTE, such as integrated curricula and comprehensive human development, and they may therefore align their work with the immediate interests of capitalist logic.

CONCLUSION

The purpose of this article was to analyze the epistemological meaning attributed to teaching knowledge in the studies by Gauthier *et al.* (2014), Shulman (2014), and Tardif (2014) in order to understand whether they establish relationships with a teacher training project linked to comprehensive human development. To this end, we drew on the studies of the three researchers.

It was observed that Gauthier *et al.* (2014), Shulman (2014), and Tardif (2014) are scholars from developed capitalist countries who have had a strong influence in Brazil since the 1990s. Despite differences in nomenclature, the researchers analyzed base their work on a defense of everyday classroom practice and reflection on it to construct new knowledge. As a result, the role of theory in teacher training and knowledge is subordinated to practice in a dissociated way, which neglects the role of teacher training institutions as the locus of initial and continuing teacher training.

The subordinate role of theory in teaching and the practical-utilitarian meaning attributed to the work of teachers disconnects teacher training and knowledge from the revolutionary meaning of praxis and, consequently, from a new sociability. Furthermore, it reinforces the logic of capital, given that the defense of the market and the entities involved is centered on a practical-utilitarian and short-term teaching profile.

Contrary to this perspective, throughout this article we present the foundations of teacher training and knowledge from the perspective of praxis. In praxis, theory and practice are seen as inseparable, and this relationship has a teleological meaning of transforming individual and collective realities. Furthermore, higher education institutions are fundamental in the training and constitution of knowledge for teaching.

In the case of teaching for PTE, the relationship with praxis in the constitution of teaching knowledge is even more evident, given that this educational modality has work, science, technology, and culture as its axes. When focused on comprehensive human development and socially referenced education, teaching knowledge needs an even closer relationship with praxis, given that, in PTE, the relationship with the world of work is direct.

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